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False Theta Functions and the Verlinde Formula

I will present joint work with Antun Milas. A false theta function looks similar as an ordinary theta function of a lattice, but it has no nice modular transformation properties. These functions appear in characters of a well-known family of logarithmic conformal field theories, the $(1,p)$ -algebras. I will explain how regularized false theta functions carry an action of the modular group. This action will then be used to define and to compute a Verlinde algebra on the span of characters of the $(1,p)$ algebra. The Verlinde algebra in turn can then be compared to the algebra of quantum dimensions of regularized characters.